READY-TO-USE CASSETTES FROM LAMO-LEM

THE CHEST OF CLASSICS

Four classic computer games for the ZX80 and MicroAce:

LUNAR LANDER produces an instrument panel at the bottom of the screen, showing altitude, velocity, fuel, and burn rate. The objective is to control your burn rate in order to safely land a lunar module on the Moon. Your descent craft appears at the top of the screen, and after each burn, its height is adjusted. Land too hard, and you will crash into the instrument panel!

K-TREK uses a color keyboard overlay to transform the keyboard into the console of a Klingon battlecruiser. Console controls include: Phasers, Scanners, Impulse Engines, and Warp Drive. Your viewport is an 8 x 8 grid at the top of the screen. It displays stars, Klingon bases,Federation Starships, and your coordinates in the current quadrant. Your mission is to explore Federation territory, to seek out and destroy Federation Starships, and to boldly go where no Klingon has gone before! On each turn, Phasors maybe fired by guessing an enemy's grid coordinates. A direct hit scores a kill. But the Federation is firing back, draining your energy. Your only hope is to find a secret Klingon base at which to refuel.

MINDMASTER is a code-breaking game with nine levels of difficulty. The computer chooses the "code" (a sequence of four graphic symbols). You must determine the sequence through guesses, and the clues that the computer gives you. As the game progresses, a gameboard is constructed on the screen, showing all previous guesses. If the code is not "cracked" within eight tries, the computer divulges the hidden sequence.

LIFE is the famous game of cellular growth, originated by John Conway. A 16 x 16 grid on the screen becomes your "cell culture". Place a starting pattern of cells on the grid, and watch as cell colonies grow, change, and die, presenting an ever-changing screen display. (Each time NEWLINE is pressed, the screen is updated to reflect the next "generation"). You can enter the number of generations that you want the culture to live through between displays. Using a machine code routine, LIFE can grow through 1000 generations in just over a minute. "Life With Your Computer", an article reprinted from BYTE Magazine, is included to explain the logic and strategies of this fascinating game.

THE CHEST OF CLASSICS comes packed in a zip-lock bag with a manual, cassette of four games, color keyboard overlays, program listings in BASIC, article reprint, and cassette loading hints $9.95

A NIGHT IN LAS VEGAS

Welcome to Desert Palms Casino! For your gambling pleasure, we have provided a slot machine, Roulette wheel, Blackjack table, and Craps table. Chips too!

BLACKJACK is played against the dealer with four decks. Slip on the full-color keyboard overlay and place a bet. Press "DEAL" for a hand. Press "HIT" for additional cards, and "STAND" when through. The value and suit of each card in your hand is displayed in a column beside the dealer's card. After the dealer draws, both hands are displayed and totaled. Win 1½-1 on BLACKJACK. When a marker in the deck is reached, the cards are automatically shuffled, (and "SHUFFLE" appears on the screen). A marker is again placed about 2/3 down the deck. After each hand, your total holdings are displayed, (a "GRUBSTAKE" key is provided for those who've gone broke).

CRAPS provides a Las Vegas Craps table, complete with color layout and chips! A color overlay containing a Craps layout is slipped over the keyboard. Choose the type of bet you want to make by pressing the appropriate spot on the layout, then enter the amount of your bet. Press "ROLL" and hope for a "natural". You can bet the PASS LINE, (with ODDS), HARDWAYS, The FIELD, BIG 6 & 8, etc. Any combination of different bets may be riding on each throw. After a throw, winning bets are displayed, and winnings are computed using accurate odds, (for instance, an ODDS, bet on 8 would pay 6-5). A guide card which explains the rules is included.

ROULETTE offers the excitement of the Roulette table. Place bets on red/black, even/odd, columns, dozens, 1-18, 19-36, numbers, 0, or 00. Most bets pay even money or 2-to-1, but bets on a single number, 0, or 00 pay 35-to-1. Up to five bets may be placed before a spin. Press "SPIN" and watch numbers flash past until a winner comes up. Winning bets are displayed with their payoffs. If you lose everything, you can obtain a loan.

SLOT MACHINE displays a slot machine, in full graphics, on the screen. Pull the handle, (NEWLINE), and watch the reels click into place. A machine code routine allows action on the screen. A pair of BARS or CHECKERED FLAGS pays 4-to-1. Three-of-a-kind SPOTS pays 15-to-1. Three BARS pays 50-to-1, and three CHECKERED FLAGS pays 100-to-1! Can you build ten silver dollars into a fortune?

(A NIGHT IN LAS VEGAS is provided for entertainment only and would not, of course, be suitable for actual gambling.)

A NIGHT IN LAS VEGAS comes complete in zip-lock bag, with manual, cassette of four games, guide cards, miniature layouts, chips, and three full-color keyboard overlays $9.95

ZX80 HOME COMPUTER PACKAGE

A personal computer is made useful by its programs. Here's a set of programs that every home computer should have:

ETCH-A-SCREEN lets you rapidly paint text and graphics on the screen. Move up, down, and sideways across the screen, leaving behind any text or graphics symbol, (including inverse characters). Screen display is 32 characters across by 16 rows. Draw intricate screen pictures. Great for logos or a cassette index. A machine code routine lets you store the screen display with the picture frozen just as it looks. LOAD and display (or modify) later. (The cover of the Home Computer Package manual was produced with this program.)

ELECTRONIC BILLBOARD may alone be worth the price of this package. It will display a banner of giant letters which move continuously across the screen to spell out a message of up to 210 characters. The message repeats continuously until BREAK is pressed. It features easy setup for displays and exhibits. Just type in the message and press NEWLINE. It begins automatically. Store the message on tape with SAVE. LOAD the tape and press GOTO 100 to start the message again. To change messages, just BREAK, GOTO 1, and type in the new message. Perhaps you saw ELECTRONIC BILLBOARD in use at WESCON '81.

COMPOSER uses a color overlay to produce a multi-octave keyboard for the composition of electronic music. Enter a score note-by-note. COMPOSER will store 225 notes. You can produce sharps or flats, and can control the length of a note (from "full" to 1/64th). EDIT keys let you easily modify selected notes. When a composition is complete, press PLAY to broadcast the music to a nearby AM radio. (Or it can be played through a receiver, or recorded directly into your tape recorder.) A four-page section of the manual describes the use of this program, including the TEMPO and DECAY keys, which let you create special sound effects, like laser blasts and arcade noises.

CALCULATOR gives your computer high-precision floating point math. CALCULATOR will multiply or divide any two numbers from 9999999999. to .0000000001, and give an answer accurate to twenty decimal places! To use, type RUN and enter two numbers separated by "/" or "*". Press NEWLINE, and the answer will appear.

CHECKBOOK BALANCER keeps a running tabulation of your bank account. It reconciles your bank statement to your current checkbook balance, and displays both. A keyboard overlay gives you a set of TRANSACTION keys and a set of DISPLAY keys. Deposits and withdrawals are entered using the TRANSACTION keys. When a bank statement arrives, transactions shown on the statement are cleared using the CLEAR key. A list of up to 30 uncleared transactions is kept by CHECKBOOK BALANCER, and may be viewed by using the DISPLAY keys. DISPLAY keys will also give BANK BALANCE (from last statement), and CURRENT BALANCE (current checkbook balance). CHECKBOOK BALANCER can store an account balance of up to $32767.99. (and is accurate to the penny).

THE HOME COMPUTER PACKAGE is packed in a zip-lock bag, with manual, cassette with all programs, reference cards, two full-color keyboard overlays, a blank score sheet (for musical compositions), and a blank screen display sheet $9.95

THE ZX80 BUSINESS PACKAGE

The Business Package consists of SEARCH & SAVE, (a file storage system which allows retrieval by key), and VideoComp-4 an electronic worksheet that manipulates whole columns of numbers at once.

SEARCH & SAVE is a file storage program with three parts. PART ONE: A file template is constructed. Choose the number of records per file (1-12), and enter the prompts which will appear during data entry. (A file consists of up to 12 records. Each record may be a text string of any length.) The file template is SAVED on a blank tape. PART TWO: Use the template to enter your data. A prompt will appear for each record which is to be entered. When a file is completed, the computer automatically SAVES it, (put your tape recorder in RECORD mode manually). Begin the next file, and continue until all data is entered. PART THREE: Rewind the tape to the beginning. You may locate any data file on the cassette by putting the template in the FIND mode, entering the record number (1-12) to search, and a keyword or phrase to search for. Start your tape player. SEARCH & SAVE will examine each file on the cassette. If it finds a matching word or phrase within the record you have specified, the file is immediately displayed. Each file may hold approximately 250 characters. The number of files stored on a cassette is limited only by the length of the cassette. SEARCH & SAVE can be used with inventory items, purchase orders, and mailing lists. Or for a telephone & address list, engagement calendar, album/book collection, or magazine article index, (summarize an article, then locate later with a keyword).

VideoComp-4 uses a keyboard overlay that allows complex intercolumn calculations to be performed on three columns, each with 16 entries. For instance, define an operation that column A is to perform on column B, leaving the result in column C. Instantly, each element of A acts on B and leaves the result at its respective position in column C. The operation defined may be almost any arithmetic expression, and may allow a column or single element of a column to interact with any or all other elements or columns. The values of single elements or whole columns, can be entered or changed. VideoComp-4 is an aid for budget planning, financial modelling, forecasts, and projections. Because you can rapidly manipulate whole columns, various "what if" scenarios can be analyzed.

VideoComp-4 has an added dimension. A machine code routine allows you to automatically chain to the VideoGraph program, (which follows the VideoComp-4 program on the cassette), and produce a full-screen graph, with labels, of your VideoComp-4 results. To use, press the GRAPH keys on the VideoComp-4 overlay, and start your tape player. VideoGraph is LOADED, and when started, will immediately produce a graph of column C, using column A for Y-axis values, and using the labels you had given the columns. VideoGraph produces results which can be photographed from the screen.

The ZX80 BUSINESS PACKAGE, with manual, reference cards, keyboard overlay, and cassette containing SEARCH & SAVE, VideoComp-4, and VideoGraph, is just $9.95

SUPER Z

SUPER Z builds machine code modules that add seven new statements to ZX80 & MicroAce 4K BASIC: TAB, SCROLL, MEM, PAUSE, READ, RESTORE, AND DATA. Most statements take the form of the USR function, like PRINT USR (MEM), which prints the amount of unused memory. USR (PAUSE) allows you to update the screen (for action) by displaying the picture for a specified time period. USR (SCROLL) causes the whole display to move up one line, (losing the top line), and can keep your programs from running into the "screen full" error. USR (n + TAB) moves the print position to the nth column, (1-32). The TAB statement may occur within a PRINT statement, and n may be an expression, (allowing a computed TAB). The READ, RESTORE, and DATA statements enable numbers stored in DATA statements to be transfered to variables using USR (READ).

To use SUPER Z, the program is loaded and a list of the desired new statements is entered. The program constructs a machine code module containing just those statements, (to conserve space), in line 0. The module contains the instructions necessary to make the statements work. It is invisible to users, and will SAVE, LOAD, and RUN, along with a BASIC program.

A BASIC program which takes advantage of the new statements can be written immediately after construction of the SUPER Z module. Or, a module can be labeled with an appropriate REM statement, and SAVED for later use. A ready-to-use SUPER Z module containing all statements is included on the cassette. Just LOAD and write programs with SUPER Z statements.

Also included on cassette is a demonstration program which uses all new statements.

SUPER Z comes in a zip-lock bag with manual, reference cards, and cassette containing SUPER Z program, SUPER Z module, and demonstration program $9.95

ZX80 1K DISASSEMBLER

The 1K DISASSEMBLER will translate a machine code program, or the 4K ROM into its assembly language instructions. It is operable over the address range 0-32767, (which includes all ROM and RAM addresses).

To use, enter a beginning address, and press NEWLINE. A Key value is calculated and displayed. Reference the Key in the disassembler manual to find the full mnemonic assembly language instruction. The Disassembler calculates all one and two byte values, displacements, and addresses, and displays them beneath the Key. The machine code equivalent is also displayed in decimal beneath the Key.

To read the next, and succeeding assembly instructions, just press NEWLINE. For each assembly instruction, a unique Key will be displayed, along with values for calculated numbers, displacements and addresses. To complete the mnemonic found in the manual substitute the calculated values for d, n, and nn. Press "G" to halt the program, or "A" to enter a new starting address.

The 4K ROM can be disassembled to reveal the secrets of Sinclair's 4K BASIC, and to expose useful assembly language subroutines. In addition, a 75 byte section of memory, (more, on machines with larger memories), is provided into which machine code programs can be stored for disassembly. Since this section of memory is unaffected by the Disassembler program, a machine code program or segment may be loaded into it, and then the Disassembler may be loaded from tape. The Disassembler is then directed to the beginning of the section. By disassembling a segment at a time, large machine code programs may be translated. (You can disassemble the 1K Disassembler!)

MEMORY TEST will test your RAM memory (it automatically adjusts for all memory sizes), and display the results on the screen. If all memory passes its test, the screen will show "MEMORY OK". Otherwise, the addresses of failing bytes will be listed.

To use, the program is LOADED and RUN. Almost instantly "MEMORY OK" will appear if there are no problems. If bad locations are found, each is listed on the screen in decimal. If more than one screenful are detected, the remainder can be displayed using the CONTINUE key. Continue until the Lamo-Lem logo appears at the bottom of the screen, signifying the end of the test. To run the test again from the beginning, press RUN.

The MEMORY TEST tests each byte from location 16441 to the top of the stack. Failure to properly store any of the following test patterns results in the memory location being displayed: all 0's, all 1's, a 0 rotated through each bit position while the rest are 1's, a 1 rotated through each bit position while the rest are 0's. A failure which is detected and displayed would probably indicate the need to replace a faulty memory chip.

THE ZX80 1K DISASSEMBLER AND MEMORY TEST is packed in a zip-lock bag with manual, reference cards, and a cassette containing the 1K Disassembler and Memory Test programs $9.95

ORDER FROM: **LAMO-LEM LABS, BOX 2382, LA JOLLA, CA 92038**

WITH STANDARD 4K ROM CHIP	
Chest of Classics ($9.95)	
Night in Las Vegas ($9.95)	
Home Computer Pack ($9.95)	
Business Pack ($9.95)	
Super Z ($9.95)	
ZX80 Disassembler ($9.95)	
Cassette Library ($59.95) (all of above, in bookshelf album)	
TOTAL	

WITH OPTIONAL 8K ROM CHIP	
ZX81 Classics ($9.95) (like Chest of Classics)	
ZX81 Disassembler ($9.95) (like ZX80 Disassembler)	
TOTAL	

SHIP TO:

Name ____________________

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No postage, shipping, or handling charges.
All programs run within 1K memory.
4K ROM programs won't run with 8K chip.